GOVERNMENT OF INDIA
EARTH SCIENCES
LOK SABHA

UNSTARRED QUESTION NO:3608
ANSWERED ON:07.12.2016
Monsoon Forecast by IMD
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Will the Minister of EARTH SCIENCES be pleased to state:

(a) whether Monsoon forecast for this year by a private agency has proved more accurate than the India Meteorological Department (IMD) predictions and if so, the details thereof;

(b) whether most of the long range forecasts issued by the IMD regarding monsoon/south-west monsoon season were not accurate;

(c) if so, whether the Government has conducted any study to ascertain the reasons for making the wrong forecasts by IMD and if so, the details thereof; and

(d) the measures taken to improve the working and technology of IMD and to remove the shortcomings in the functioning thereof?

Answer

THE MINISTER OF STATE FOR MINISTRY OF SCIENCE AND TECHNOLOGY AND MINISTRY OF EARTH SCIENCES (SHRI Y. S. CHOWDARY)

(a) No Madam.
(b) Six out of the nine forecasts issued by India Meteorological Department (IMD) for the 2016 southwest monsoon season were not within the forecast limits. The verification of the various forecasts issued for the 2016 southwest monsoon season is given below.

Region Period Forecast (% of LPA) Actual Rainfall
(% of LPA)
22thApril 2nd June (Update) 1st August
All India June to September 106 Â± 5 106 Â± 4 97
Northwest India June to September
108 Â± 8 95
Central India June to September 113 Â± 8 106

Northeast India June to September 94 Â± 8 89
South Peninsula June to September 113 Â± 8 92
All India July 107 Â± 9 107
All India August 104 Â± 9 91
All India August to September 107 8 93
*LPA-Long Period Average.

(c) Yes Madam.

Prior to June, most of the climate forecasting models were indicating high probability for the development of La Nina during the second half of the monsoon season, which was supposed to help normal to above normal rainfall over India. However, that did not happen. Thus non development of La Nina as expected and below normal rainfall during June and August due to unfavorable phases of intra-seasonal activity caused most of the operational forecasts to be overestimated than the actual rainfall.

(d) IMD regularly reviews the operational long range forecasting system to improve it through in house research and development activities & collaboration with various research institutions in the country. The operational statistical models are mainly improved by implementing the latest state of the art statistical forecasting techniques and by using better predictors.

Under the National Monsoon Mission initiative, other institutions of Ministry of Earth Sciences (MoES) , Indian Institute of Tropical Meteorology (IITM) Pune, Indian National Centre for Ocean Information Services (INCOIS), Hyderabad and National Centre for Medium Range Weather Forecasting (NCMRWF), NOIDA have embarked upon to build a state-of-the-art coupled ocean atmospheric climate model for a) improved prediction of monsoon rainfall on extended range to seasonal time scale (16 days to one season) and b) improved prediction of temperature, rainfall and extreme weather events on short to medium range time scale (up to 15 days) so that forecast skill gets quantitatively improved further for operational services of IMD.